

High Voltage Delivery Service Credit Computation
Marginal Cost-Based Analysis

Customers At or Above 69,000 Volts

Cost to Serve (\$/kW):

$$Y = (1829.2 \times X^{-0.7455}) \text{ \$/kW}$$

See p. 2 of this Attachment N (fitted curve)

Cost to Serve (area under the curve in MW-\$/kW):

$$\int Y = \int \{ 1829.2 \times X^{-0.7455} \}$$
$$\int Y = \{ 1829.2 \times X^{(-0.7455 + 1)} \} \div \{-0.7455 + 1\}$$

Area from 0.1 MW to 269.55 MW = 25,865.47 (MW-\$/kW)

Customers Below 69,000 Volts

Cost to Serve (\$/kW):

$$Y = \$409.58 / \text{kW}$$

See p. 3 of this Attachment N (weighted average cost)

Cost to Serve (area under weighted average cost line in MW-\$/kW):

$$\int Y = \int 409.58$$
$$\int Y = 409.58 \times X$$

Area from 0.1 MW to 269.55 MW = 110,361.33 (MW-\$/kW)

Credit Computation:

$$\begin{aligned} \text{Credit Area} &= 110361.33 \text{ (MW-}\$/\text{kW)} - 25,865.47 \text{ (MW-}\$/\text{kW)} \\ &= 84,495.86 \text{ (MW-}\$/\text{kW)} \end{aligned}$$

$$\begin{aligned} \text{X-axis Length} &= 269.55 \text{ MW} - 0.1 \text{ MW} \\ &= 269.45 \text{ MW} \end{aligned}$$

$$\begin{aligned} \text{Y-axis Length} &= \text{Credit Area} \div \text{X-axis Length} \\ &= 84,495.86 \text{ (MW-}\$/\text{kW)} \div 269.45 \text{ MW} \\ &= \$313.59 / \text{kW} \end{aligned}$$

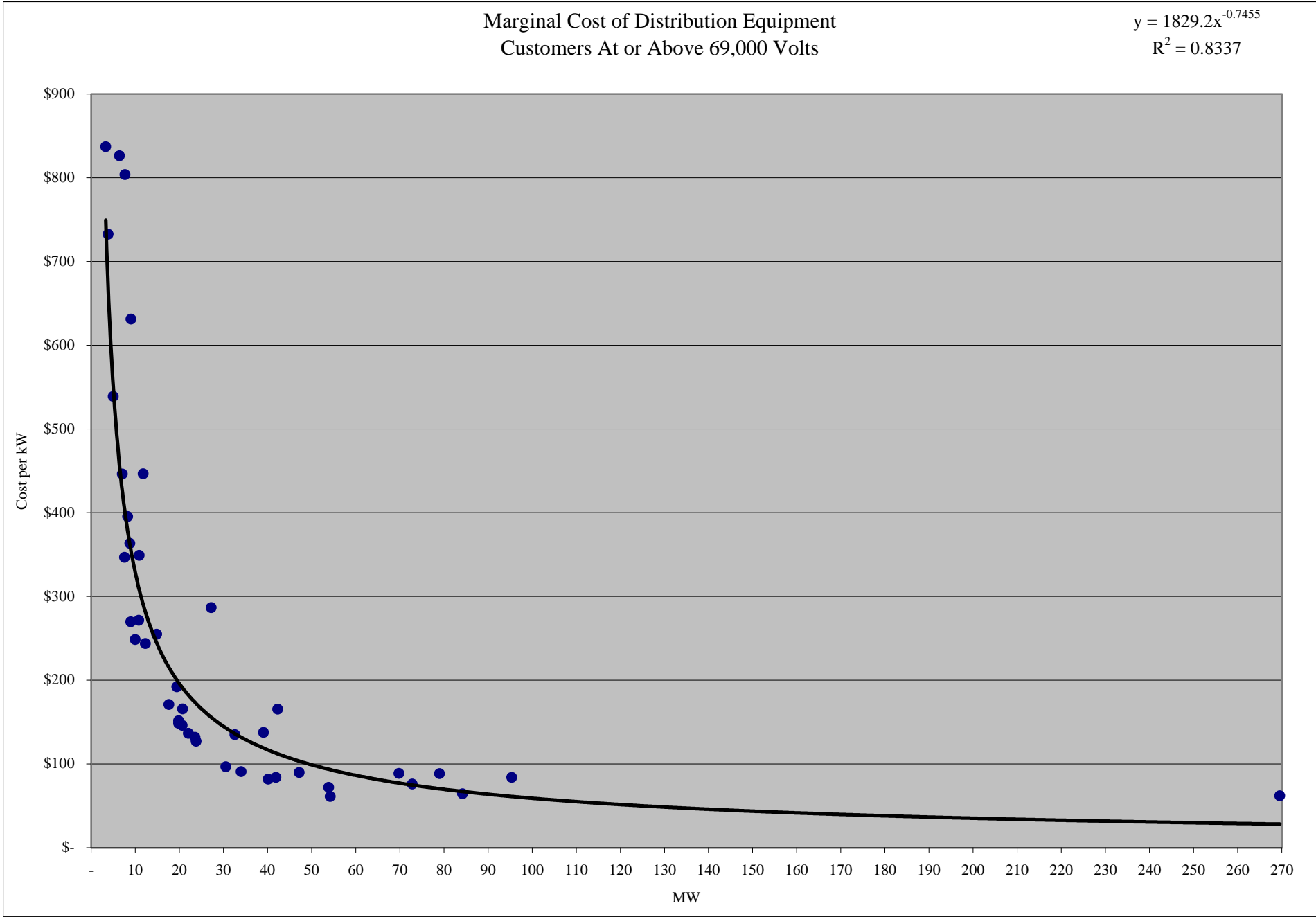
$$\begin{aligned} \text{Add General Plant at 7.8\%:} \\ &= (\$313.59 / \text{kW}) \times 1.078 \\ &= \$338.05 / \text{kW} \end{aligned}$$

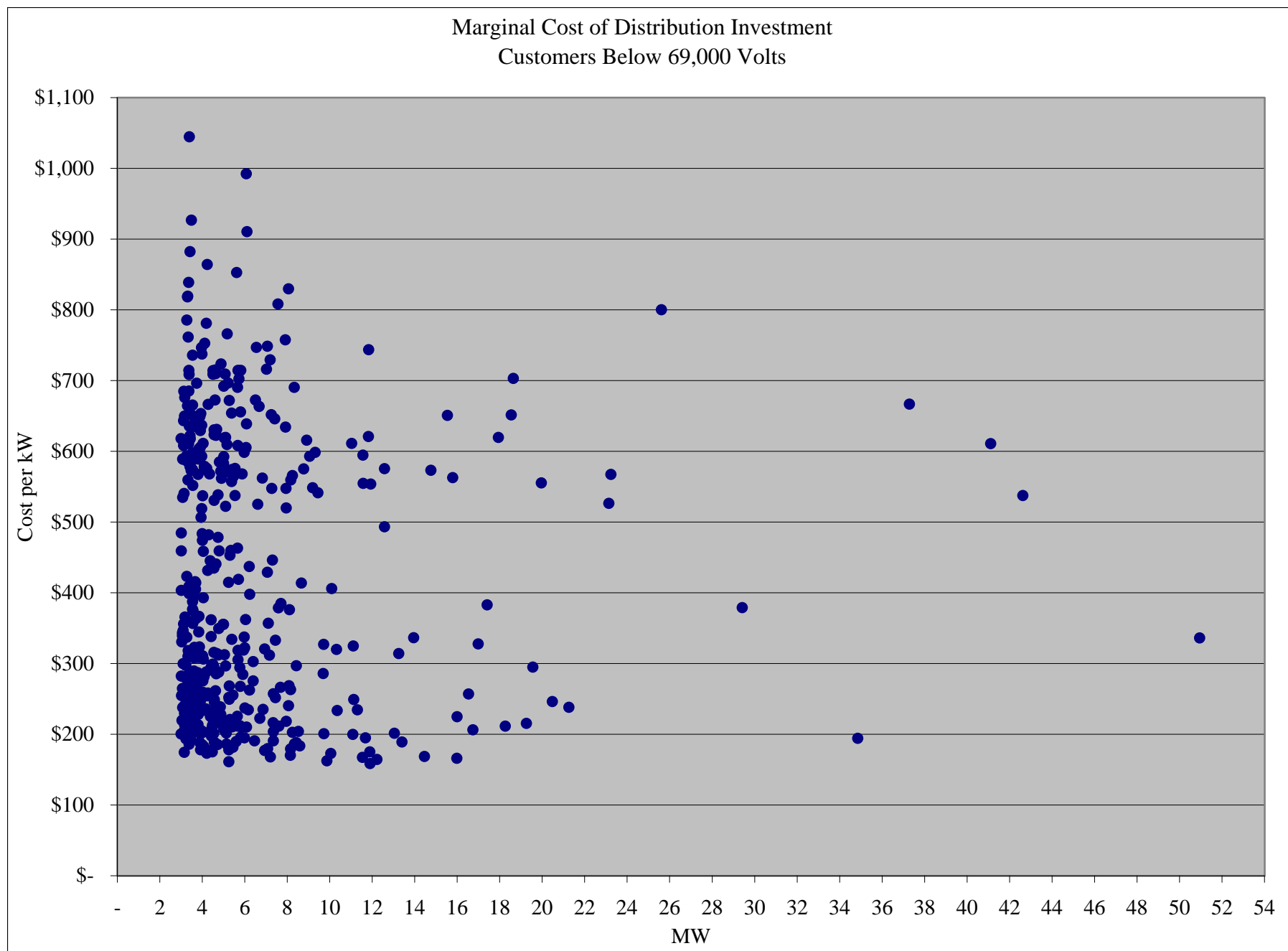
See ComEd Exhibit 13.1 at p. 44

$$\begin{aligned} \text{Determine Annual Marginal Revenue Requirement (ALPCC = 0.1174):} \\ &= \$338.05 / \text{kW} \times 0.1174 \\ &= \$39.69 / \text{kW} \end{aligned}$$

See ComEd Exhibit 13.1 at p. 44

$$\begin{aligned} \text{Determine Marginal Monthly Credit:} \\ &= \{ \$39.69 / \text{kW} \} \div 12 \\ &= \$3.31 / \text{kW} \end{aligned}$$





Customers with demands at or above 3 MW
Weighted average cost: \$409.58/kW